

1 1. A method comprising:
2 forming a protective coating on an exposed
3 surface of an electronic device, including forming the
4 protective coating on a conductive termination connected to
5 a circuit element in the electronic device; and
6 making a window in the protective coating to
7 expose the termination.

1 2. The method of claim 1 wherein the coating is
2 uniform in thickness.

1 3. The method of claim 1 wherein the coating
2 conforms to the geometric configuration of the electronic
3 device.

1 4. The method of claim 1 wherein coating the
2 electronic device comprises vapor deposition.

1 5. The method of claim 1 wherein the protective
2 layer comprises a polymer.

1 6. The method of claim 5 wherein the polymer
2 comprises poly-para-xylylene.

1 7. The method of claim 1 wherein the electronic
2 device comprises an integrated power device (IPD).

1 8. The method of claim 1 wherein the circuit
2 element comprises a semiconductor.

1 9. The method of claim 1 wherein the circuit
2 element comprises a power semiconductor.

1 10. The method of claim 1 wherein making a window
2 in the protective coating comprises using a laser to remove
3 the protective coating.

1 { 11. The method of claim 10 wherein the laser
2 comprises a stroke marking laser.

1 { 12. The method of claim 10 wherein the laser
2 comprises a mask marking laser.

1 { 13. The method of claim 10 wherein the laser
2 comprises a fixed-beam laser.

1 14. The method of claim 10 wherein making a window
2 in the protective coating comprises using a predetermined
3 pattern.

1 15. The method of claim 14 wherein the
2 predetermined pattern comprises a pattern of parallel
3 strokes for removing strips of the protective coating.

1 16. The method of claim 1 wherein making a window
2 in the protective coating comprises making a perimeter cut
3 with a laser to outline the area of the protective coating
4 to be removed and removing the outlined area of the
5 protective coating.

1 17. The method of claim 16 wherein removing the
2 outlined area of protective coating comprises peeling the
3 protective coating away from the surface of the electronic
4 device.

1 18. The method of claim 17 wherein peeling the
2 protective coating comprises passing a gas over the surface
3 of the protective coating until the protective coating
4 dislodges from the electronic device.

1 19. The method of claim 18 wherein the gas
2 comprises compressed air.

1 20. The method of claim 18 wherein the gas
2 comprises an inert gas.

1 21. The method of claim 1 further comprising:
2 applying solder to the portion of the
3 conductive termination exposed by the window in the
4 protective coating.

1 22. The method of claim 21 wherein applying solder
2 comprises reflow soldering.

1 23. The method of claim 1 further comprising:
2 encapsulating the electronic device in a
3 potting material.

1 24. The method of claim 23 wherein the potting
2 material comprises a silicone resin.

1 25. The method of claim 23 wherein the potting
2 material comprises polyurea.

1 26. A method comprising:
2 forming a protective coating of poly-para-
3 xylylene on an exposed surface of an integrated power
4 device, including forming the protective coating on a
5 conductive termination connected to a semiconductor in the
6 power device; and
7 cutting a window in the protective coating
8 using a laser to expose the termination.

1 27. A method comprising:
2 forming a protective coating on an exposed
3 surface of an electronic device, including forming the
4 protective coating on a conductive termination connected to
5 a circuit element in the electronic device;
6 making a window in the protective coating to
7 expose the termination;
8 applying solder to the portion of the
9 conductive termination exposed by the window in the
10 protective coating; and
11 encapsulating the electronic device in a
12 potting material.

1 28. A method for use with an electronic device
2 having a conductive termination pad and an electronic
3 component connected to the pad, the method comprising:
4 applying a protective coating to surfaces of
5 the termination pad and the electronic component;
6 cutting a window in the protective coating to
7 expose the termination pad; and
8 flowing solder into the window to make
9 electrical connection between the solder pad and a circuit.

1 29. A circuit comprising:
2 a circuit board;
3 an electronic device comprising
4 a substrate,
5 a conductive termination pad formed on the
6 substrate,
7 an electronic component mounted on the
8 substrate and connected to the termination pad,
9 a protective coating on the pad and the
10 electronic component, and
11 a window formed in the protective coating
12 to expose the conductive termination pad; and
13 solder connecting the termination pad to the
14 circuit board via the window.

1 30. An apparatus comprising:
2 an electronic device;
3 a protective, conformal coating on the surface
4 of the electronic device containing conductive terminations;
5 and
6 a window in the protective coating to expose
7 the conductive terminations.